

December 9, 2009

APPLICANT: KOREA ELECTRIC POWER CORPORATION
APPLICATION: APR-1400 PRESENTATION
SUBJECT: SUMMARY OF THE NOVEMBER 18, 2009, PUBLIC MEETING WITH
KOREA ELECTRIC POWER CORPORATION ON THE APR-1400
DESIGN

On November 18, 2009, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and Korea Electric Power Corporation (KEPCO) at The Legacy Hotel in Rockville, Maryland. The purpose of the meeting was to exchange information regarding the APR-1400 design, KEPCO pre-application activities and the Title 10 of the *Code of Federal Regulations* (10 CFR) Part 52 review process. This meeting marked the first official interaction between the NRC staff and KEPCO regarding the APR-1400 design. A list of attendees is provided as Enclosure 1.

A public meeting notice was issued and documented in the Agencywide Documents Access and Management System (ADAMS) with Accession Number ML093080747 which includes the Meeting Agenda. The KEPCO Presentation Slides, Enclosure 2, are available in ADAMS, under Accession Number ML093430109 and the NRC Meeting Presentation Slides, Enclosure 3, are also available in ADAMS, under Accession Number ML093430104.

KEPCO presented an overview of the company and its current activities in the nuclear arena in Korea and other countries. KEPCO has twenty nuclear power plants at four sites, initial operation in 1978, with the latest in 2005. KEPCO plans to construct eight new plants in Korea, including four APR-1400 plants (Shin-Kori 3 and 4 and Shin-Ulchin 1 and 2). The APR-1400 design received Standard Design Approval from the Korea Institute of Nuclear Safety in 2002.

KEPCO representatives stated that the APR-1400 design has been developed using improvements from the System 80+, OPR1000 and Improved OPR100 designs.

The APR-1400 improvements include four trains of safety injection system, an in-containment refueling water storage tank, digital instrumentation and control (I&C), and severe accident mitigation features. The design features that are different from System 80+ include a pre-stressed concrete cylindrical containment, a fluidic device on safety injection tanks (SIT), improved digital I&C and advanced control room design, PLUS 7 fuel, use of Passive Autocatalytic Recombiners/igniter for hydrogen mitigation, and enhanced severe accident management strategies such as External Reactor Vessel Cooling. Other design differences include a higher thermal power, use of pilot-operated safety relief valves on the pressurizer, and an integrated head assembly.

For safety injection systems, KEPCO described the use of 4 - train direct vessel injection system, including SIT, pumps, and fluidic device (a passive flow regulator in the SIT). KEPCO also presented detailed information on its use of the digital I&C, man-machine interfaces and human factors engineering design, including compliance with United States regulations.

In addition, KEPCO proposed a topical report schedule and a design certification application date, and also expressed interests in future interactions with the NRC to further discuss the APR-1400 design activities.

The NRC staff presented an overview of the 10 CFR Part 52 and design certification process. The presentation summarized the licensing process, which included early site permit, design certification, combined license, standard design, and manufacturing license. The NRC staff also discussed the description of a Design Certification Rule (DCR), contents of applications, and the process to amend a DCR.

In addition, the NRC staff discussed some of the policy issues and lessons learned from other design centers. These included budget requirements and availability of funding in fiscal year 2010 and beyond. The NRC staff also discussed the availability of documents in English and some of the challenges with foreign applicants, including the time difference, teleconferencing, and difficulty of organizing public meetings.

The NRC staff closed the meeting by stating that this meeting did not initiate the review of the APR-1400 design certification and that staff resources for this review are not currently in the NRC budget for at least the next two years. Additional interactions with KEPCO regarding their plans are expected to occur in the future.

Please direct any inquiries to Michael S. Magee at 301-415-6988 or via e-mail at
Michael.Magee@nrc.gov.

/RA/

Michael S. Magee, Project Manager
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Division of New Reactor Licensing
Office of New Reactors

Docket No. 52-021

Enclosures:

1. Attendance Sheet
2. KEPCO Presentation Slides (ML093430109)
3. NRC Presentation Slides (ML093430104)

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Accession No.: **ML093430411; Pkg: ML093430414**

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DATE	12/09/2009	12/09/2009	12/09/2009	12/09/2009

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Meeting with Korea Electric Power Corporation (KEPCO) on the APR-1400 Design
Attendance Sheet

November 18, 2009

Name	Organization/Affiliation
Alan Levin	AREVA
J. Stewart Blard	Chesapeake Nuclear Services
Ha Bang Kim	DOOSAN
Joo Seok Baek	ISL
Inn Seock Kim	ISSA Technology
Brian Han	KEPCO
Ki Ho Jang	KEPCO
Ki Hwang Hahm	KEPCO
Kun Mo Chung	KEPCO
Kwan Hee Yun	KEPCO
Moon-Ghu Park	KEPCO
Myeong-Soo Lee	KEPCO
Sang-Woog Lee	KEPCO
Seung Jong OH	KEPCO
Sung Woo Kiw	KEPCO
Young-Jin Chang	KEPCO
Sum Tack Hwang	KNF
Chang Kwon Kim	KOPEC
Jong Tae Seo	KOPEC
Sun Koo Kang	KOPEC
Tae Sun Ro	KOPEC
Tai Chul Park	KOPEC
Jin Chung	MHI
Storm Kauffman	MPR
George Geaney	MPR
Sujit Samaddar	NRC
Don Dube	NRC
Hossein Hamzehee	NRC
Jerry Wilson	NRC
Ralph Landry	NRC
Joel Jenkins	NRC
Jeffrey Ciocco	NRC
Michael Magee	NRC
Ruth Reyes	NRC
Taesuk Hwang	NRC
Autumn Szabo	NRC
Bob Fitzpatrick	NRC
Blake Nelson	Pillsbury
Matias Travieso-Diaz	Pillsbury
Hawon Lee	The Chosun Ilbo
Hankwon Choi	URS
Mark Beaumont	URS
Robert S Lee	Westinghouse

Enclosure 1

KEPCO Mailing List

(12/09/2009)

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